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EXAMINER	
KAO, WEI PO ERIC	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/541,763	BICHOT ET AL.	
	Examiner	Art Unit	
	WEI-PO KAO	2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 October 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *12-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *12-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *07/11/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendments

1. The examiner has acknowledged the amendments made to the Abstract.

2. The examiner has acknowledged the amendments made to the Claims.

3. The examiner has acknowledged the amendments made to the Drawing.

4. The examiner has acknowledged the amendments made to the Specification.

5. The rejections directed to the 35 U.S.C 112 second paragraph have been withdrawn.

Response to Arguments

6. Applicant's arguments, see pages 10-13, filed on 10/09/2008, with respect to claims 12-26 have been fully considered and are persuasive. The rejections of claims 12-26 have been withdrawn.

Claim Objections

7. Claims 12 are objected to under 37 CFR 1.75 because of the following informalities:

The claimed terms, "the duration" and "the duration information," of claim 1 lines 4 and 7 seem to refer to the "a time duration" recited in line 4. It is suggested to change the claimed terms to "the time duration."

Claim Rejection - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding Claim 12, the claimed term, "the distributed inter-frame space interval," of lines 4-5 has no antecedent basis.

Claim Rejection - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in - (1) an application for patent, published section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for the purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 12, 13, 14, 15, 18, 19, 22, 23, 24, 25 and 26 are rejected under 35 U.S.C. 102(e) as being anticipated by Cervello et al, U.S. Publication No. 2002/0071448 (hereinafter Cervello).

Regarding Claim 12, Cervello teaches that **a method for reducing contention conflicts in a broadcast/multicast wireless network** (see Abstract, Figures 3-5, Paragraphs [0002] [0020-0026]) **comprising the steps of: coordinating by an access point** (see Figure 4 and 5 e.g. an access point, AP) **a contention-free communication by the access point** (see Figure 3, Paragraph [0017] e.g. a CFP-contention free period starts by a beacon frame and finishes with a CF-End frame, both transmitted by the AP; during the CFP, there is no competition for the

medium) **by computing a time duration** (see Figures 3 and 5, Paragraphs [0017] [0037-0038] e.g. [0037-0038] show the calculations of Durations/ID fields of the RTS-request to send and CTS-clear to send) **and communicating the duration in the distributed inter-frame space interval** (see Figure 3, Paragraphs [0016-0017] [0037] i.e. the interval, which comprises a plurality of SIFS-short inter-frame space, between the beacon frame and the CF-End frame is considered as the distributed inter-frame space interval) **to one or more wireless stations such that a communication stream to at least one of the wireless stations is uninterrupted for the duration** (see Figure 3, Paragraphs [0017] [0021-0022] e.g. during the CFP, there is no competition for the medium; the AP polls each STA asking for pending frames to be transmitted)**, wherein the duration information is used to control a counter** (see Paragraphs [0014] [0034] [0039] [0042] e.g. both NAV-network allocation vector and ONAV-overlapping network allocation vector are updated with the Duration/ID values) **in a wireless station to prevent the wireless station from attempting to transmit for a predetermined period of time** (see Paragraphs [0041-0042] i.e. when the STA has non-zero ONAV, the AP will then automatically defer the polling to the future; in another word, the counter ONAV prevents the STA from attempting to transmit for at least the time period that takes the AP to poll the STA again).

Regarding Claim 13, Cervello teaches that **a method for reducing contention conflicts in a broadcast/multicast wireless network between a wireless station and an access point** (see Abstract, Figures 3-5, Paragraphs [0002] [0020-0026]) **comprising the steps of: receiving digital packets from an access point** (see Figure 3, Paragraph [0017] e.g. a CFP-contention free

period starts by a beacon frame and finishes with a CF-End frame, both transmitted by the AP; during the CFP, there is no competition for the medium)**, receiving a computed duration** (see Figures 3 and 5, Paragraphs [0017] [0037-0038] e.g. [0037-0038] show the calculations of Durations/ID fields of the RTS-request to send and CTS-clear to send) **in a distributed inter-frame space interval for transmission of a plurality of broadcast/multicast frames** (see Figure 3, Paragraphs [0016-0017] [0037] i.e. the interval, which comprises a plurality of SIFS-short inter-frame space, between the beacon frame and the CF-End frame is considered as the distributed inter-frame space interval)**, controlling a network allocation counter in response to the computed duration** (see Paragraphs [0014] [0034] [0039] [0042] e.g. both NAV-network allocation vector and ONAV-overlapping network allocation vector are updated with the Duration/ID values)**, and receiving a communication stream that is uninterrupted** (see Figure 3, Paragraphs [0017] [0021-0022] e.g. during the CFP, there is no competition for the medium; the AP polls each STA asking for pending frames to be transmitted) **for the duration in response to the state of the network allocation counter** (see Paragraphs [0041-0042] i.e. when the STA has non-zero ONAV, the AP will then automatically defer the polling to the future; in another word, the counter ONAV allows the STA to transmit data to the AP at a later time depending on the ONAV)**.**

Regarding Claim 14, Cervello further teaches that **the method further including the step of: imbedding at least one network allocation vector duration information in an IEEE 802.11 compliant data packet for transmission of an uninterrupted plurality of the**

broadcast/multicast frames to wireless stations to reduce contention conflicts among IEEE 802.11 compliant wireless stations (see Paragraphs [0014] [0021-0022] [0037-0039]).

Regarding Claim 15, Cervello teaches that **an access point that receives digital packets embedded in a transmission stream** (see Abstract, Figures 3-5, Paragraphs [0002] [0020-0026]) **comprising: a means to receive digital packets** (see Figures 3 and 5, Paragraphs [0017] [0037-0038] e.g. the AP is able to receive frames from the STA, such as CTS or pending frames)**; a means for computing a duration for transmission of a plurality of broadcast/multicast frames** (see Figures 3 and 5, Paragraphs [0017] [0037-0038] e.g. [0037-0038] show the calculations of Durations/ID fields of the RTS-request to send and CTS-clear to send)**, the duration controlling a network allocation counter in a plurality of devices associated with a wireless network** (see Paragraphs [0014] [0034] [0039] [0042] e.g. both NAV-network allocation vector and ONAV-overlapping network allocation vector are updated with the Duration/ID values)**; a means to communicate the duration in a distributed inter-frame space interval** (see Figure 3, Paragraphs [0016-0017] [0037] i.e. the interval, which comprises a plurality of SIFS-short inter-frame space, between the beacon frame and the CF-End frame is considered as the distributed inter-frame space interval) **to one or more wireless stations in a header packet** (see Paragraph [0037]) **to reduce contention conflicts among the wireless stations** (see Figure 3, Paragraphs [0017] [0021-0022] e.g. during the CFP, there is no competition for the medium; the AP polls each STA asking for pending frames to be transmitted).

Regarding Claim 18, Cervello teaches that **an access point that receives digital packets embedded in a transmission stream** (see Abstract, Figures 3-5, Paragraphs [0002] [0020-0026]) **comprising: a node** (see Figure 3, Paragraph [0017] e.g. the PC-point coordinator) **that retains control of a medium by fixing a duration field and whereby the node can adjust the duration field to release the medium** (see Figures 2 and 3, Paragraph [0017] e.g. 19-24; it is clear the transmission time/CFP can be adjusted).

Regarding Claim 19, Cervello further teaches that **the access point, wherein the node can fix a duration to hold the medium until the node decides to releases the medium** (see Figure 3, Paragraph [0017] i.e. after the CF-End frame, until the CP-contention period).

Regarding Claim 22, Cervello teaches that **a method for reducing contention conflicts in a broadcast/multicast wireless transmission** (see Abstract, Figures 3-5, Paragraphs [0002] [0020-0026]) **comprising: the steps of coordinating by an access point in a first cell** (see Figure 4 and 5, Paragraph [0018] e.g. an access point, AP) **a contention-free session** (see Figure 3, Paragraph [0017] e.g. a CFP-contention free period starts by a beacon frame and finishes with a CF-End frame, both transmitted by the AP; during the CFP, there is no competition for the medium), **each said contention-free session including multiple transmissions with other member stations in the first cell, using interframe spaces** (see Figure 3, Paragraphs [0016-0017] [0037] i.e. the interval, which comprises a plurality of SIFS-short inter-frame space, between the beacon frame and the CF-End frame is considered as the distributed inter-frame

space interval) **of sufficient duration such that a single duration** (see Figures 3 and 5, Paragraphs [0017] [0037-0038] e.g. [0037-0038] show the calculations of Durations/ID fields of the RTS-request to send and CTS-clear to send) **during a session delivers the broadcast/multicast information in a single communication stream eliminating the requirement for contending for the medium for each broadcast/multicast frame transmission** (see Figure 3, Paragraphs [0017] [0021-0022] [0037-0042] e.g. during the CFP, there is no competition for the medium; the AP polls each STA asking for pending frames to be transmitted).

Regarding Claim 23, Cervello teaches that **a mobile terminal** (see Abstract, Figures 3-5, Paragraphs [0002] [0020-0026] e.g. a STA) **comprising: means to receive a computed duration** (see Figures 3 and 5, Paragraphs [0017] [0037-0038] e.g. [0037-0038] show the calculations of Durations/ID fields of the RTS-request to send and CTS-clear to send) **for transmission of a plurality of broadcast/multicast frames** (see Figure 3, Paragraph [0017] e.g. a CFP-contention free period starts by a beacon frame and finishes with a CF-End frame, both transmitted by the AP; during the CFP, there is no competition for the medium), **wherein said computed duration controls a counter in a plurality of devices associated with a wireless network including said mobile terminal** (see Paragraphs [0014] [0034] [0039] [0042] e.g. both NAV-network allocation vector and ONAV-overlapping network allocation vector are updated with the Duration/ID values).

Regarding Claim 24, Cervello further teaches that **the mobile terminal, further wherein a communication stream to at least one of said plurality of devices associated with said wireless network is uninterrupted for said computed duration** (see Figure 3, Paragraphs [0017] [0021-0022] [0037-0042] e.g. during the CFP, there is no competition for the medium; the AP polls each STA asking for pending frames to be transmitted).

Regarding Claim 25, Cervello further teaches that **the mobile terminal, further wherein said counter is a network allocation counter** (see Paragraph [0034]).

Regarding Claim 26, Cervello further teaches that **the mobile terminal, further wherein said counter prevents all but one of said plurality of devices associated with said wireless network from attempting to transmit for a predetermined period of time** (see Paragraphs [0041-0042] i.e. when the STA has non-zero ONAV, the AP will then automatically defer the polling to the future; in another word, the counter ONAV prevents the STA from attempting to transmit for at least the time period that takes the AP to poll the STA again; also paragraph [0041] lines 5-12 teaches that when a STA is in the CFP under PCF, the RTS/CTS exchange is not effective, namely the STA transmits frames regardless the value of the NAV).

Claim Rejection - 35 USC § 103

12. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

13. The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.

3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

15. Claims 16, 17 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cervello et al, U.S. Publication No. 2002/0071448 (hereinafter Cervello) in view of Meier, U.S. Patent No. 7251232.

Regarding Claim 16, Cervello teaches that **an access point that receives digital packets embedded in a transmission stream** (see Abstract, Figures 3-5, Paragraphs [0002] [0020-0026]) **comprising: a means for receiving duration for transmission of a plurality of broadcast/multicast frames of a video frame transmission** (see Figures 3 and 5, Paragraphs [0017] [0037-0038] e.g. the AP is able to receive frames from the STA, such as CTS or pending frames) **for downlinking an uninterrupted plurality of broadcast/multicast frames** (see Figure 3, Paragraphs [0017] [0021-0022] e.g. during the CFP, there is no competition for the medium; the AP polls each STA asking for pending frames to be transmitted)**; and means for controlling a network allocation counter in response to the duration** (see Paragraphs [0014] [0034] [0039] [0042] e.g. both NAV-network allocation vector and ONAV-overlapping network

allocation vector are updated with the Duration/ID values)**, and controlling attempts to access the network in response to the network allocation counter** (see Paragraphs [0041-0042] i.e. when the STA has non-zero ONAV, the AP will then automatically defer the polling to the future; in another word, the counter ONAV prevents the STA from attempting to transmit for at least the time period that takes the AP to poll the STA again)**; a wireless node comprising: the network allocation counter** (see Paragraph [0014])**.** However, Cervello does not teach that **the access point comprises the network allocation counter.** Meier from the same field of endeavor teach that **the access point comprises the network allocation counter** (see Column 5 Lines 46-49)**.** At the time of the invention, it would have been obvious to a person ordinary skill in the art to implement a network allocation counter in an access point. The motivation would have been that this prevents access points and stations from accessing the medium during observed medium idleness during the CFP.

Regarding Claim 17, Cervello further teaches that **the access point, wherein the network allocation counter corresponds to an IEEE 802.11 compliant network allocation vector** (see Paragraph [0023] [0034])**.**

Regarding Claim 20, Cervello teaches all the limitations in claim 18 except that **the access point, wherein the node permits bandwidth provisioning in the node in order to provide quality of service for a downstreaming service.** Meier from the same field of endeavor teach that **the access point, wherein the node permits bandwidth provisioning in the node in order**

to provide quality of service for a downstreaming service (see Abstract, Columns 7 and 8 e.g. column 8 lines 55-64)**.** At the time of the invention, it would have been obvious to a person ordinary skill in the art to implement a bandwidth provisioning mechanism in the node. The motivation would have been that there is a need for a contention-based channel access method for supporting parameterized QoS applications (see column 6 lines 63-67).

16. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cervello et al, U.S. Publication No. 2002/0071448 (hereinafter Cervello) in view of Sugar et al, U.S. Publication No. 2002/0061031 (hereinafter Sugar).

Regarding Claim 21, Cervello teaches all the limitations in claim 21 except that **the access point, wherein the duration is the largest possible period, in accordance with a wireless communication standard.** Sugar from the same field of endeavor teach that **the access point, wherein the node permits bandwidth provisioning in the node in order to provide quality of service for a downstreaming service** (see Abstract, Paragraph [0091] i.e. the equation of the duration and the fragment duration F yield a largest possible period)**.** At the time of the invention, it would have been obvious to a person ordinary skill in the art to implement a longest possible duration allowed by 802.11. The rationale would have been that it is desired to optimize the resource of the communication network.

Conclusion

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Referring to the PTO Form 892, references are cited to show similar method and system of controlling the access to the wireless medium.

18. Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to WEI-PO KAO whose telephone number is (571)270-3128. The examiner can normally be reached on Monday through Friday, 8:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on (571)272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ricky Ngo/
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/Wei-po Kao/
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